INSTRUCTION MANUAL

TEAC® A-1250S

STEREO TAPE DECK

Your new TEAC equipment has been manufactured under the strictest quality control procedures, each unit has been thoroughly checked at the factory. Should any damage have been incurred during transit or should you have any doubts as to its performance, contact your dealer as soon as possible.
Our investigation has shown that approximately 40% of the calls for service immediately after purchase result from improper operation of the equipment. Therefore it is important that you thoroughly read and understand this manual before placing the unit in operation. A lack of, or improper cleaning can also result in a degradation of performance. Careful observation of the cleaning and servicing hints contained in this manual will contribute to a lengthened trouble free unit life. Please consult the trouble shooting chart before seeking service as most common problems are throughly covered by this chart.

Environmental conditions

Although this deck may be used in either the upright or horizontal positions, the upright position is preferred from the point of more efficient ventilation. Mounting locations to be avoided are:

Locations of constant high temperature

Do not operate this unit near heating appliances or on top of an amplifier where amplifier heat would contribute to a rise in temperature. Do not place the unit where it will be exposed to direct summer sunlight. Temperature extremes will not only cause degradation of sound quality but will also shorten the useful operating life of the unit. Avoid temperatures higher than 100°F.

Locations of high humidity

High humidity locations will shorten equipment life due to corrosion and possible fungus growth on printed circuit boards.

Dusty environments

Your TEAC equipment is a precision machine and as such should be protected from dust. Operation in a dusty atmosphere will result in excessive head and bearing wear. Dust covers are available from your TEAC dealer for most TEAC components. Your tapes should also be kept dust free.

Fluctuation of the supply voltage

Should you be in an area where line voltage fluctuation is severe, the use of an automatic voltage controller is recommended.

Service

Should the equipment need repair, contact the dealer where it was purchased, or the authorized TEAC Service Center nearest you.

1) The Warranty period is described in the enclosed warranty card, read the card for complete details.
2) For repairs after expiration of the warranty period a service charge will be made in addition to the price of repair parts.
3) If only repair parts are required, place your order with your dealer, nearest TEAC authorized Service Center.

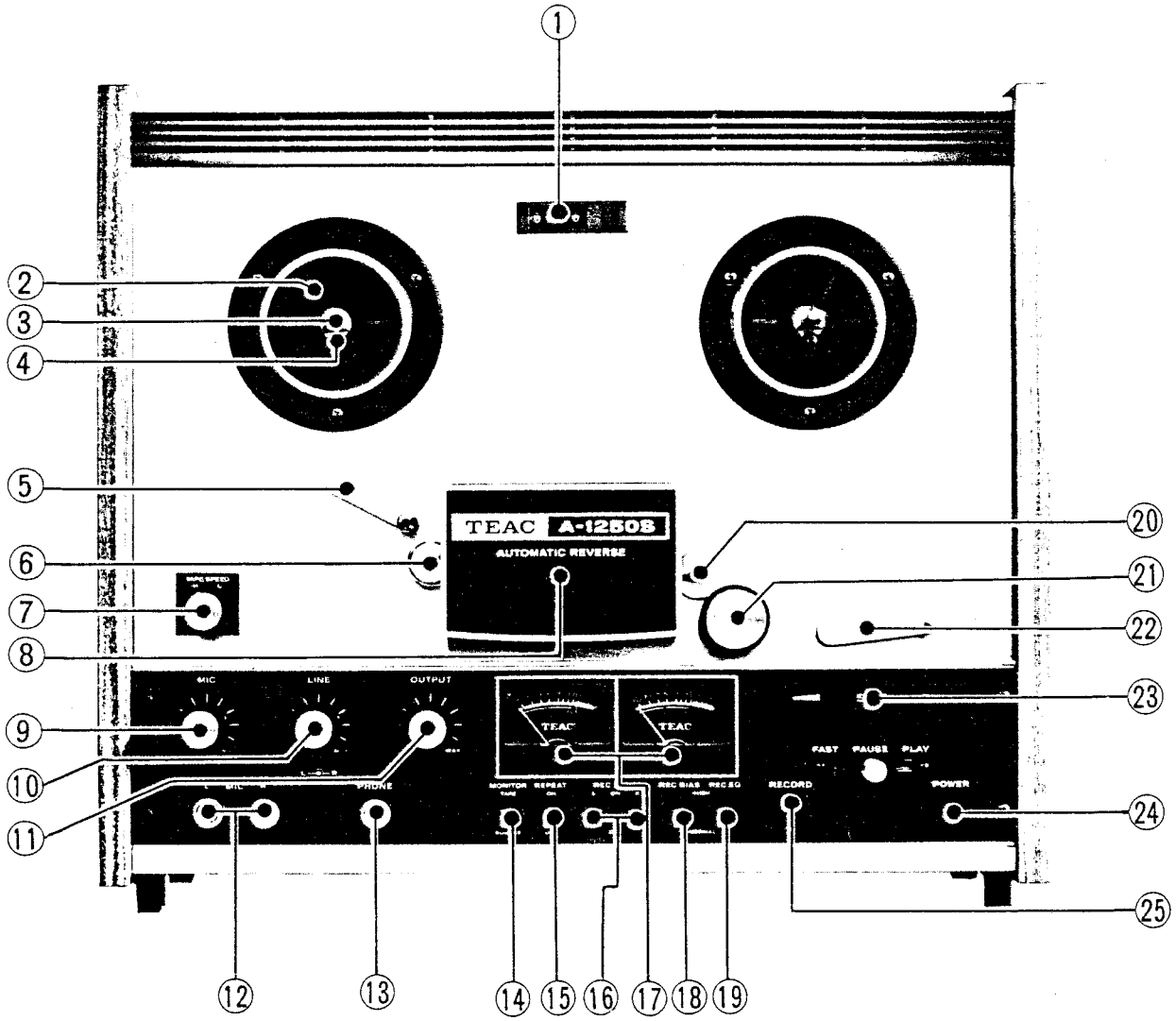
Note

Although the unit may still be under the Warranty period, you may be charged for repairs made necessary by misuse, or damage incurred as a result of improper operation.

Contents

Function of the operating controls 4
Connections to and from the A-1250S 6
Rear panel connections 6
General recording information 8
Threading the tape 9
Basic tape deck operation 10
Playback of 4 track stereo tape 10
Playback of 4 track mono tape 11
General information and precautions at recording 12
Splicing the tape 14
Expert use of REC. Bias, Rec. Eq. and PAUSE 14
Recording in 4 track stereo 15
Recording in 4 track mono 16
Recording sound-on-sound 17
Reel hight adjustment 17
Automatic reverse and repeat playback 18
Oiling 18
Cleaning 18
Erasing 19
Demagnetizing 19
Changing the power line setting 20
Specifications 20
Trouble shooting chart 21
Optional accessories 22
Memo 23

Function of the Operating Controls



① **Index counter**
This is for indexing the program material position on the tape. It can be reset to zero by pressing the zero reset button on its right.

② **Reel turntable**
7" reel is the maximum that can be used.

③ **Quik-Lok reel holder**

④ **Reel height adjustment**
Set this screwdriver adjustment for optimum reel position, depending upon reel thickness.

⑤ **Tension arm-reverse sensing post**
Provides proper tape tension during starts and stops, and compensates for the changing tape winding diameter. Also contains the sensing post for the automatic reverse function. Manually rotate the reels clockwise to clear the sensing foil from this post before starting the reverse operation manually with the REV (◀) button.

⑥ **Guide post-repeat sensing post**
This hard stainless steel guide post, working in combination with the tension arm, acts as a mechanical filter to absorb vibrations due to irregular unwinding of tape caused by sticking to the supply reel, or unstable travel of tape by uneven windings on the reel.
The guide post also contains the sensing contacts to provide the automatic repeat function.

⑦ **Tape speed knob**
Selects tape speed at recording or playback.
H: 7½ ips
L: 3¾ ips

⑧ **Head housing**

⑨ **Microphone level control (MIC)**

⑩ **Line input level control (LINE)**

⑪ **Output level (Playback or source) control (OUTPUT)**
Controls the tape playback output level (volume).
*The above level controls with asterisks are dual-concentric knobs. The inner knob is for the left channel (left sound) and the outer knob for the right channel (right sound). When either knob is turned, the other will rotate with it. If only one channel should be adjusted, the other knob is to be held immovable.

⑫ **Microphone jacks (MIC IN)**
L: Left. R: Right channel.
Input impedance, 600 – 10,000 ohms

⑬ **Headphone jack (PHONE)**
An 8Ω (low impedance type) is recommended.

⑭ **Monitor select switch (MONITOR)**
SOURCE: This position allows monitoring of the sound, before being recorded by the meter, and by the headphone or speaker.

TAPE: This position is used for playback or monitoring of the tape which is being recorded.

⑮ **Repeat switch**
ON: Auto repeat. (See page 18)
OFF: No repeat.

⑯ **Recording mode switches (REC MODE)**
These are for putting the deck in the recording mode, to either stereo or monaural.
LEFT: Up position allows recording of the left channel program (or the 1st and 2nd recording for mono).
RIGHT: Up position allows recording of the right channel program (or the 3rd and 4th recording for mono).

⑰ **VU (volume units) meters (left & right channel)**
Provide visual display of recording or playback signal for each individual channel.

⑱ **REC BIAS**
HIGH: This position is for recording of high performance tapes (Scotch 203, etc.) which requires a larger bias than regular tapes (Scotch 150, etc.).
NORMAL: This position is for recording of regular tapes (Scotch 150, etc.).

⑲ **REC EQ**
HIGH: This position is for recording of high performance tapes (Scotch 203, etc.) which requires a larger bias than regular tapes (Scotch 150, etc.).
NORMAL: This position is for recording of regular tapes (Scotch 150, etc.).

⑳ **Capstan**
Transports tape at a constant speed unaffected by changing diameter on reel.

㉑ **Pinch roller**
Holds tape against capstan at a constant pressure to prevent wow, speed variation and tape from shifting up or down during travel.

㉒ **Shut-off arm**
This arm automatically shuts off the tape transport mechanism when tape is completely rewound or if the tape breaks during transport (switch will operate to turn off power when this arm comes to rest at its horizontal position).

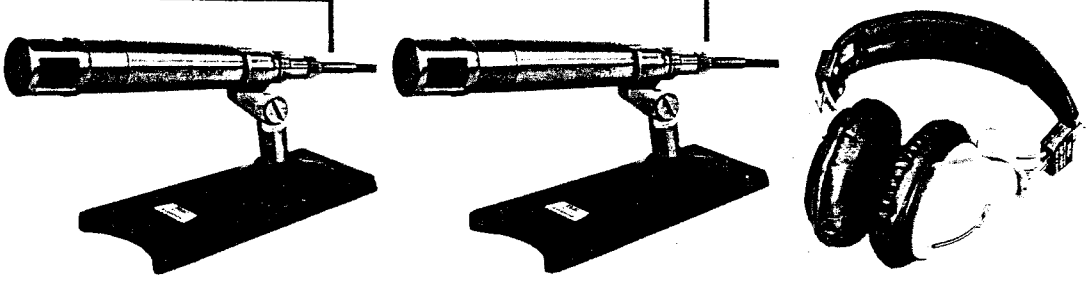
㉓ **Tape transport buttons**
With the Tape Mode Lever, below these buttons, at PLAY and the ▶ depressed, the tape will be transported from left to right, depressing the ◀ button will cause the tape to be played back from right to left.
With the Tape Mode Lever at FAST, depressing either the ▶ or the ◀ button will cause the tape to be wound at FAST speed in the selected direction.
STOP Button, stops the tape in any mode of operation, (disengages the record mode).
PAUSE: Temporarily stops the tape in the recording mode without disengaging the recording mode.
During playback (Left to right only) you are able to convert to the recording mode at any time by simultaneously pressing the ▶ and the record button.
This feature is most usefull for editing or for eliminating unwanted material.
NOTE: If the ◀ left button should be depressed while in the recording mode, the recording mode will be automatically disengaged to prevent accidental erasure of your recording.

㉔ **Power switch (POWER)**
Level meter lamp will light to indicate power is ON when this button is depressed. To turn OFF power, depress again and release.

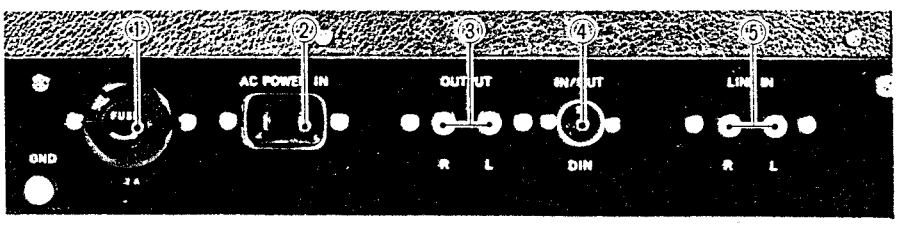
㉕ **Recording button – Record indicating lamp (RECORD)**

Rear Panel Connections

Front of A-1250S

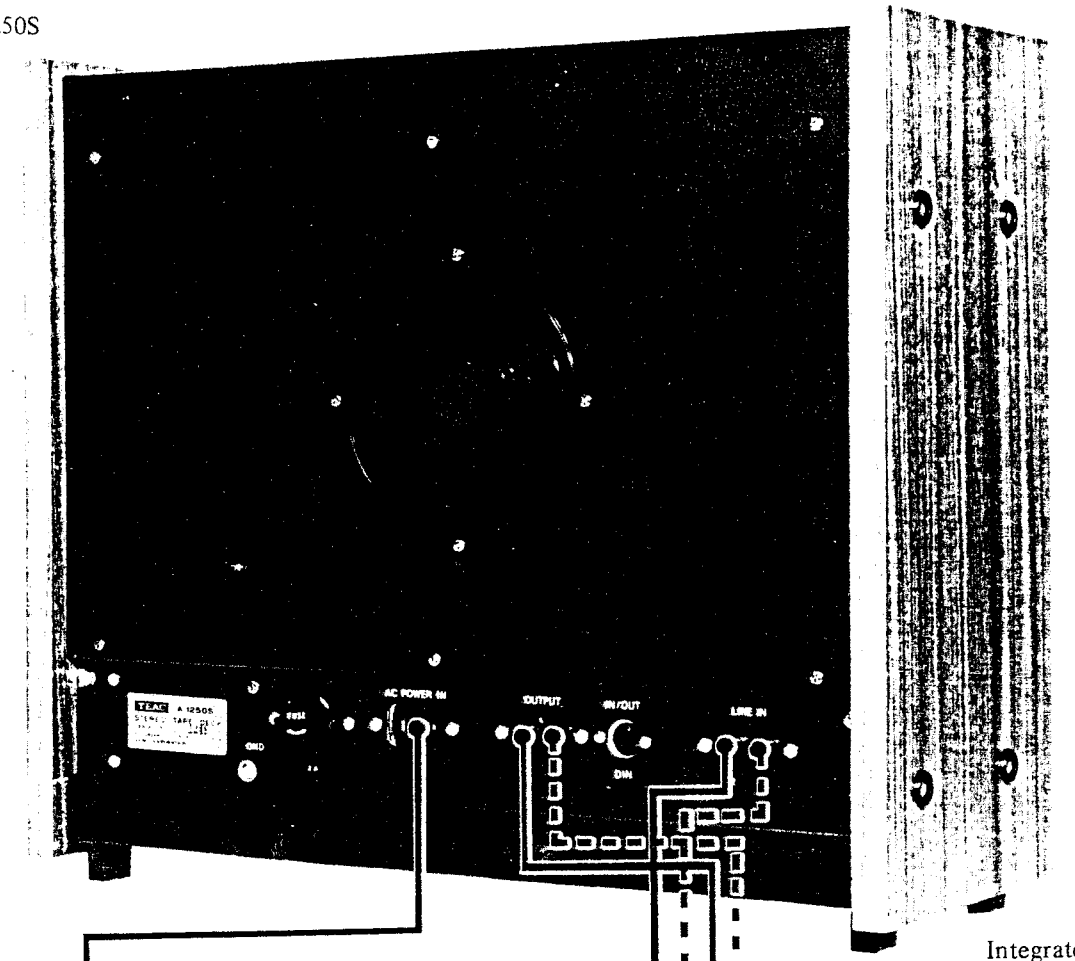


Microphone (left channel) Microphone (right channel) Stereo headphone/8 ohms

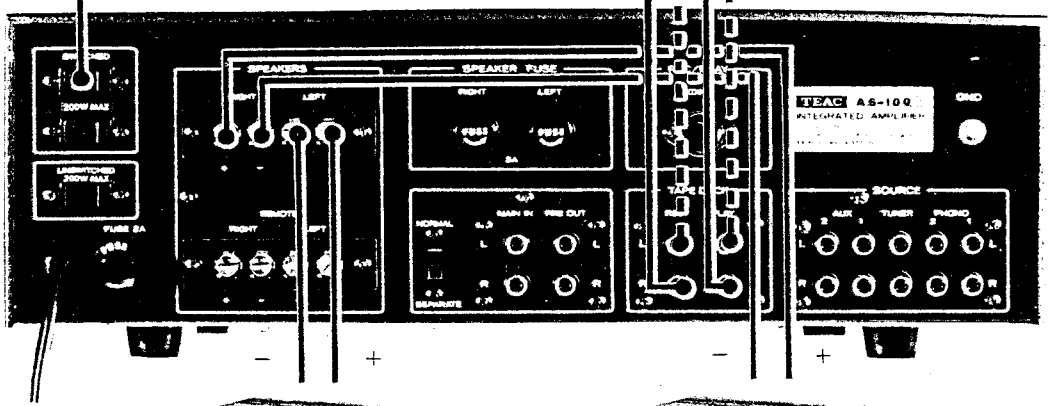


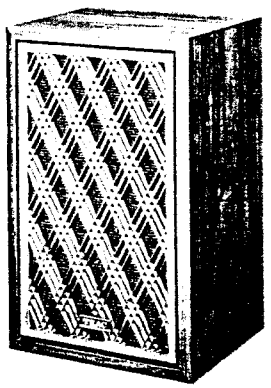
①FUSE 2A
②AC POWER IN
③OUTPUT
④IN / OUT (DIN)
⑤LINE IN

Rear of A-1250S

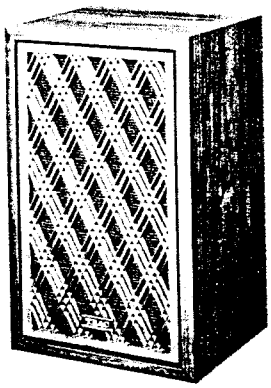


Integrated amplifier





Speaker system
(left channel)



Speaker system
(right channel)

Left channel

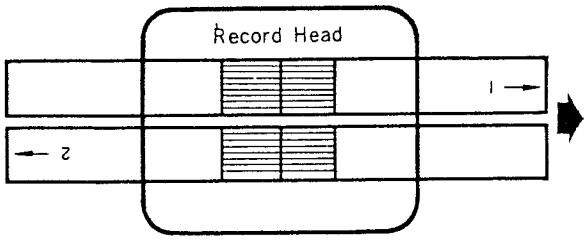
Right channel

General Recording Information

Sound recordings are made in a strip on the magnetic surface of a recording tape. This magnetized strip is called the "Track". The full tape width divided by two is called a "2" track recording, and the full tape width divided into quarters is called a "4" track recording.

"2" Track recording

2 Track recording is mainly employed in Radio Stations and professional recording studios for stereo recording, in this case both tracks are recorded simultaneously and in the same direction. 2 track recording in the home is usually done one track at a time and is played back monaurally.

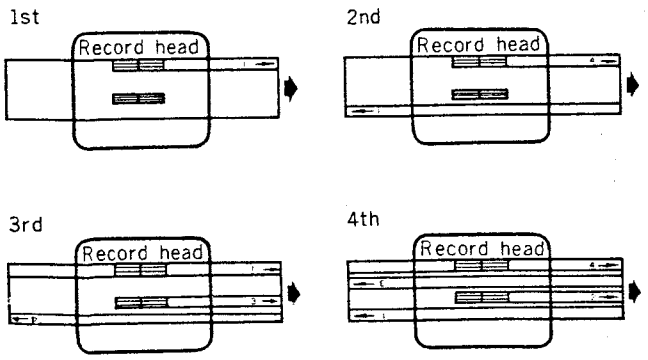


2 Track recording (Monaural)

"4" Track recording (Monaural)

In this mode, each of the four tracks is recorded individually. At the end of the tape the reels are interrecorded. The order in which the tracks are recorded is #1, #4, #3 and lastly #2. (Note) With tape threaded on the machine the tracks are numbered 1 through 4, from the top to the bottom, viewed from the base side of the tape.

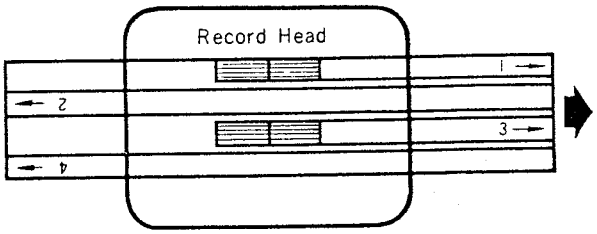
Four track recording gives maximum playback time, however, the benefits of stereo reproduction are lost.



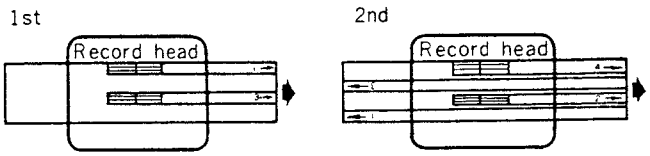
4Track recording (Monaural)

"4" Track recording (Stereophonic)

In this mode two tracks are recorded simultaneously, on the first pass of the tape, tracks #1 and #3 are recorded. The left and right reels are then interchanged and tracks #2 and #4 are recorded. The left channel sound will be on tracks #1 and #4 and the right channel sound will be on tracks #2 and #3. Four track recording in stereo will provide the best possible stereophonic reproduction and is the most widely used recording method today.



4 Track recording (Stereophonic)

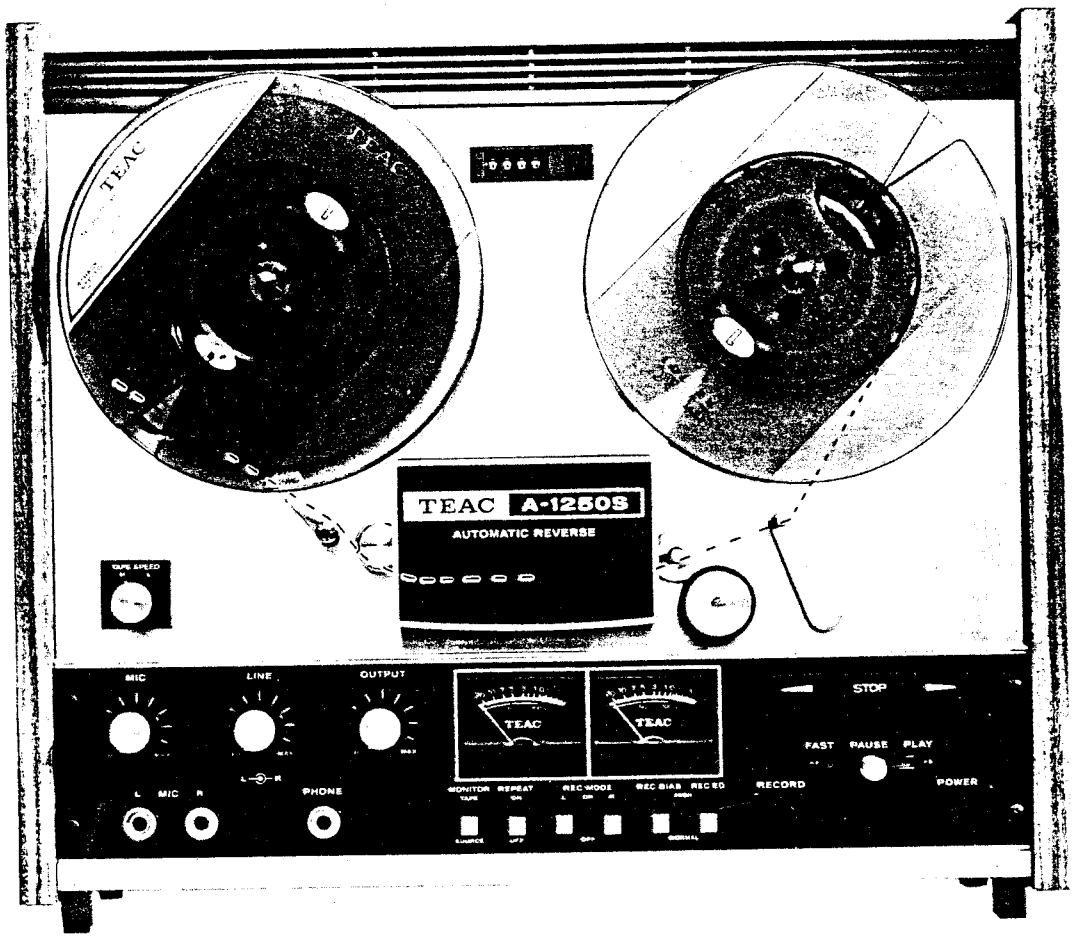


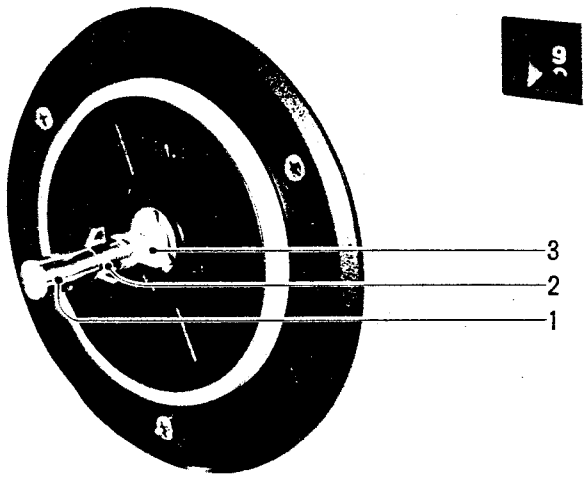
4 Track recording (Stereophonic)

Playback compatibility

A four track stereo tape deck can play back both 4 track and 2 track tapes and from the point of compatibility has the widest possible range of utilization. When playing a 2 track stereo tape on a 4 track recorder, track #1 will be completely covered by the head, track #2 however will be slightly off alignment but stereo can still be enjoyed by compensating for the slight loss of #2 track volume with the volume or balance controls. On the other hand a four track tape cannot be played back on a two track (Monaural) recorder as both tracks #1 and #2 will be reproduced together resulting in mixed unintelligible sound.

Threading the Tape





REEL PLACEMENT (either reel)

1 Loosen the reel shaft tip fully CCW (counter-clockwise). See (Ref. I) in the picture below.

2 Match the inner 3 index tabs (Ref.3) and the outer 3 index tabs (Ref.2) so they are aligned. This is done by turning the outer 3 index tabs slightly CCW until the inner and outer index tabs are in a straight line with each other.

3 With the fingers of both hands, grasp the reel and place the center hole partially over the reel shaft tip. (Ref. 1) Then gently rotate the reel CCW while sliding the reel fully onto the turntable. When the outer 3 index tabs (Ref. 2) are fully visible above the reel, you may proceed to step 4.

4 Carefully rotate the 3 outer index tabs (Ref. 2) clockwise until they stop (approximately 60 degrees or 1/6 of a revolution). Turn the reel shaft tip (Ref. 1) clockwise approximately 3 revolutions until it is finger-tip tight. Check that the outer index tabs are still in the clockwise position, about mid-way between the corresponding slots on the reel.

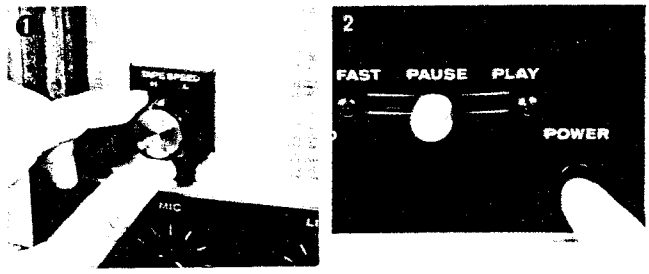
5 Repeat the above steps in the same sequence for the other reel.

6 Pull the end of tape with your fingers and thread it through each part in the order shown below.
1) Over tension arm. 2) Lower side of guide post. 3) Over the front faces of the head assembly. 4) Between capstan and pinch roller. 5) Over the lower side of the tape guide on the shut off lever.

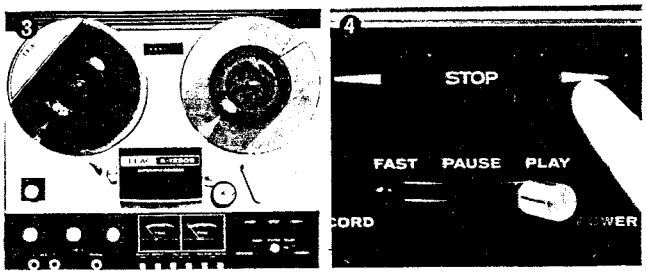
7 Secure end of tape onto empty reel. Insert the end of the tape into the notch on the reel while holding it against the reel with your fingers and wind tape 2 or 3 times onto the reel hub.

8 While holding left reel stationary, rotate the right reel counterclockwise to take up tape slack. Tape should be tight enough to bring right shut off arm to its upper limit.

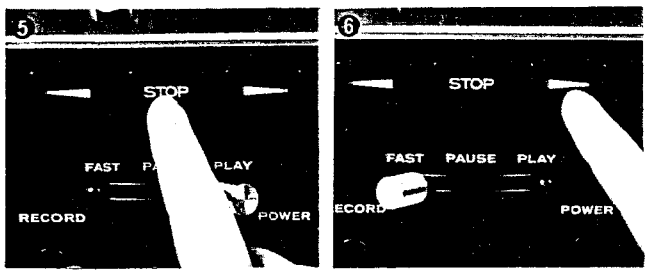
Basic Tape Deck Operation



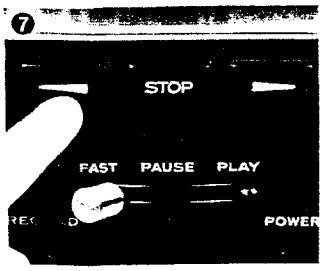
1 Set TAPE SPEED knob to desired tape speed.
2 Depress the POWER switch.



3. Thread tape on the deck.
4. Set Tape Mode Lever to PLAY and then depress the ▷ button. The tape will then be transported from left to right at the previously set speed. Once the ▷ button is depressed the deck will continue to operate even though the button is released. Depressing the ◁ button will cause the tape to be played back from right to left.



5 Depress the STOP button and the tape will stop traveling.
6 Set the Tape Mode Lever to FAST, depress the ▷ button and the tape will be wound at high speed (fast forward).



7 Depressing the ◁ button will fast rewind the tape. (In the above operation, always depress the STOP button before reversing direction of tape travel or tape may break).

Playback of 4 Track Stereo Tape

Setting the stereo amplifier

When the Model A-1250S is connected to your amplifier (refer to page 7) to playback tapes, fully retard the stereo amplifier volume control and preset the switches as below:

Mode* selector: To STEREO (or to LEFT or RIGHT for mono playback)
Tape monitor* switch: To TAPE

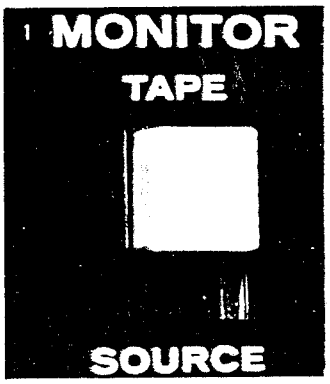
* These designations apply to TEAC amplifiers. Read the Operating Manual of your amplifier or inquire of your dealer if it is of other manufacture.

NOTE 1 – For playback of mono tape, switch to the LEFT channel for track 1 (1st playback) and 4 (2nd playback), and the RIGHT Channel for track 3 (3rd playback) and 2 (4th playback).

NOTE 2 – For setting the output level, adjust the stereo amplifier volume control.

Tape speed: Set to "H" (7½ ips) or "L" (3¾ ips), to match the speed at which the tape was recorded.

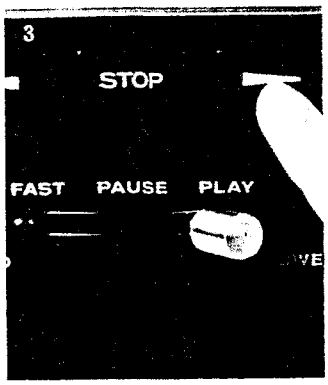
At playback of a high level recorded tape, adjust VOLUME control so as not to scale out the level meter pointers.



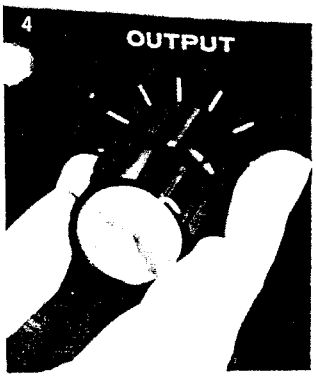
1 Set MONITOR switch to TAPE

2 Adjust playback level control (OUTPUT) knobs (inner for L; outer for R) to the desired level.

Playback of 4 Track Mono Tape

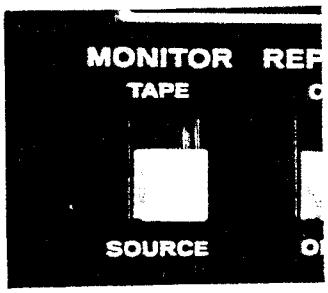


3 Set Tape Mode Lever to PLAY and depress the button.



4 Advance the OUTPUT knob clockwise and adjust so that the level meter indications (both left and right) at maximum will be under O VU.
To balance the left and right meter indications, separately adjust the OUTPUT knobs—the outer knob for the right channel and the inner knob for the left channel.

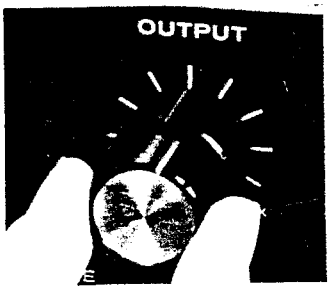
Your stereo amplifier volume control is adjusted for final speaker volume adjustment.



1 Set MONITOR switch to TAPE.

2 Adjust the inner L knob of the playback level control (OUTPUT) to a suitable level. The outer R knob should remain at the fully counterclockwise position.

3 Set Tape Mode Lever to PLAY and depress the button



4 The inner L knob only of the OUTPUT knob is adjusted and set so that the left channel level meter pointer deflection at maximum is below O VU.

5 Your stereo amplifier volume control is adjusted for final speaker volume adjustment.

Continuous playback of multi-channel mono tape

At playback of a 4 track or 2 track monophonic tape, all of the tape after completion of the first track will be wound onto the right reel, at which time the tape deck will automatically shut off. Both the left and right reels are removed, interchanged between the left and right, the reels mounted on the turntable, rethreaded on the deck, and playback continued of track 4, or the opposite track of a 2 track mono tape. On a 4 track mono tape, this is repeated three times to playback the tracks in the 1, 4, 3, 2 order. Upon finishing playback of tracks 1 and 4, the left channel OUTPUT knob is fully retarded and the rear R knob advanced to playback tracks 3 and 2.

Playback Operation Chart, 4 Track Mono Tape

Playback order	1st	2nd	3rd	4th
For playback of track	1	4	3	2
Tape mode lever at	PLAY	PLAY	PLAY	PLAY
OUTPUT knob position at	LOW (inner)	LOW (inner)	LARGE (outer)	LARGE (outer)
Level meter	Left	Left	Right	Right
OUTPUT channel	Left	Left	Right	Right

General Information and Precautions at Recording

The tape

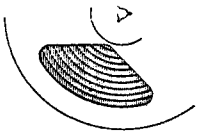
The length of a recording tape as well as the recording time, is determined by the reel diameter and the thickness of the base material.
The use of a 1 or 1½ mil base tape is recommended for 4 track high fidelity recording. Polyester base tape is preferred for use in humid or extremely dry areas.

Three recording speeds are commonly used, 3¾, and 7½ inches per second.
7½ ips is commonly used for home high fidelity recording. Generally speaking, the higher the recording speed, the better the fidelity. However, due to the extremely high quality of the TEAC tape decks, recordings of excellent quality can be made at the lower speeds. This provides maximum tape economy and extended playing time.

The recording time indicated in the chart below is for one single pass of the tape, therefore the total recording time will either two or four times that indicated, depending upon the method of recording.

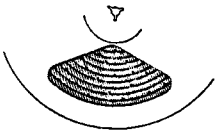
Type (Code)	Base material	Tape thickness	7" reel			Typical 4 track tape brands on market			
			Tape length	Recording time		Scotch	BASF	Agfa	SONY
				7½ ips	3¾ ips				
Standard	Acetate	52 μ 1½ mil	370m 1200 ft	30 min.	60 min.	# 111	SP-52		S-100
Standard	Polyester	52 μ 1½ mil	" "	"	"				
Long play	Acetate	35 μ 1 mil	550m 1800 ft	45 min.	90 min.	# 190			
Long play	Polyester	35 μ 1 mil	" "	"	"	# 150	LP-35	PE-31K	S-15(
Long play	Polyester	35 μ 1 mil	" "	"	"	# 203	LP-35LH	PE-36K	SLH-550
Double play	Polyester	28 μ ½ mil	740m 2400 ft	60 min.	120min.		DP-26LH	PE-46K	S-200

Good quality tape wound on correct reel

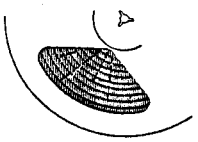


Tape condition can be judged by the appearance when wound on the reel and viewed from the side

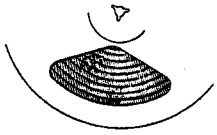
1) Is it neatly wound? 2) Is there steps or irregularities in the winding? 3) Is the color of base uniform as seen from the side? 4) Is the tape edge smooth?



Spots seen on the edge indicate 'drop out' (skipping of sound).



Creases extending from the center positively indicate uneven stretching. This is caused by differences in temperature and humidity.



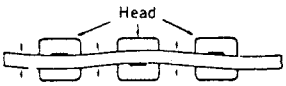
Fungus indicates old tape stored for a length of time under high humidity. Sections where the splicing tape has been applied are especially prone to support fungus growth.

Selecting the tape and reel

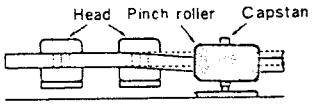
For recording, new tape is not necessarily needed as long as it is of good quality as the erase head will erase the previous recording as the new recording is made. However, avoid using tapes whose coating is worn, peeled off or stretched.

If the color of the winding is different throughout the reel it is an indication that two different types of tape have been spliced in. In some cases, the color may differ according to production lot even for the same type tape, or between opposite sides of the wound tape.

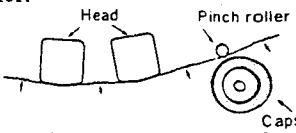
Judging tape condition by how it travels



Tapes which snake up and down between the guides and over the heads will inevitably lead to level fluctuations and azimuth misalignment.

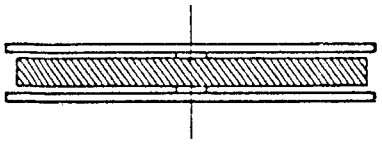


Unevenly stretched tape which travels either higher or lower than the true path of the tape will in extreme cases drift off the pinch roller.



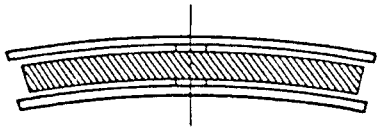
Snaky motion of unevenly stretched tape indicated by arrows.

Normal condition reel

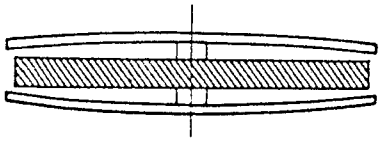


The use of a good quality reel is an important point in preventing damage to the tape edge or uneven stretching. Always use reels of the same diameter.

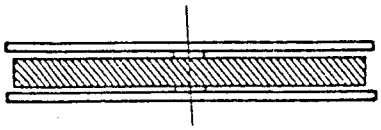
Reels which damage tape



Reels warped in the shape of a bowl will bend the tape, resulting in the so-called uneven stretching, and is sometimes countered even in new reels.

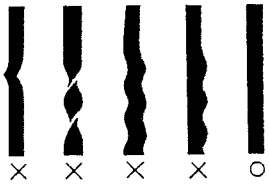


The reel may be warped in a Yo-Yo shape due to tight winding. This will not occur in reels made of hard plastic or whose hub is perfectly fitted.



If the hub is not truly perpendicular to the flange, the wound tape will be pressed against the flange resulting in a seaweed form of tape.

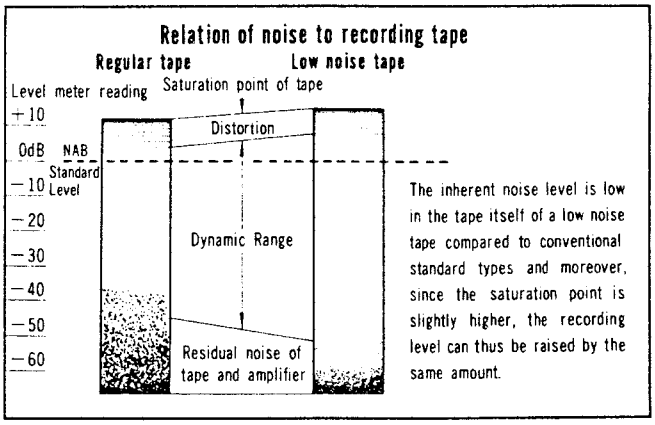
Hang down a length of tape to check straightness



Selecting tape speed

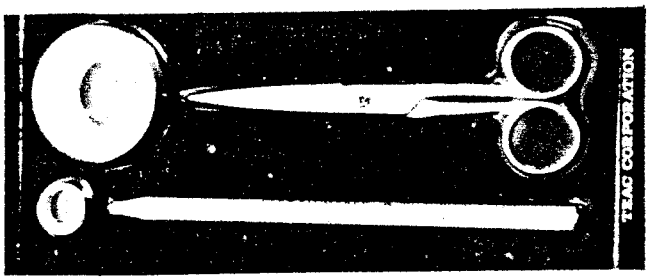
Two different tape speeds, H=19cms (7½ ips) and L=9.5cms (3¾ ips) can be selected on the TEAC Model A-1250S.
The 19cm speed is suitable for hi-fi recording of music and the 9.5cm speed is used for Back Ground Music and speech recordings.
As the 9.5cm recording speed provides twice that of the 19cm speed in recording time, if the sound quality is satisfactory at this speed it will be more economical.
The level of quality desired in the finished recording will determine which speed you should use.

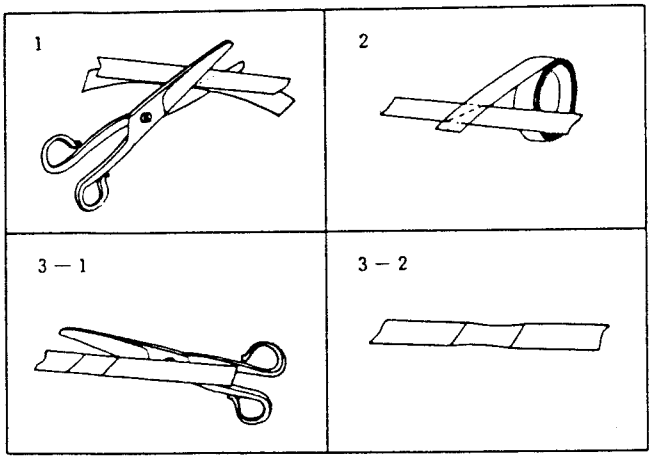
Skillful setting of recording level


Relation of noise to recording tape
Regular tape
Low noise tape
Level meter reading
Saturation point of tape
+10
0dB
NAB Standard Level
−10
−20
−30
−40
−50
−60
Distortion
Dynamic Range
Residual noise of tape and amplifier
The inherent noise level is low in the tape itself of a low noise tape compared to conventional standard types and moreover, since the saturation point is slightly higher, the recording level can thus be raised by the same amount.

Two important factors are required in a good sound tape. One is that the frequency range be wide and the other is that it has a minimum of distortion and noise.
Although the frequency response is actually determined by the tape deck performance characteristics and quality of the tape used, variation of the recording level has a great affect on the end result.
In order to make a recording with minimum noise, it is desirable to record at the highest possible level just before distortion is introduced. Even then, it is not always necessary to record at the maximum volume level of the music or to maintain the level meter indication at the dividing line between the red and white zone (0 VU). It must be kept in mind that any tape will suddenly increase in distortion, and recording sensitivity of the high notes will slightly decrease when the recording level exceeds a certain point. For this reason, a standard level of 0 dB is established with an ample margin of safety taken into consideration. In actuality, it is best to become fully acquainted with the performance of the tape and the deck you are using before determining the operating level.
Experimentation while using the "Monitor" feature will quickly acquaint you with the best recording level for the type tape you are using.

Splicing the Tape





Should your tape be broken or should you desire to edit a tape, use the procedures outlined below.

Scissors ; Completely demagnetize the scissors by use of the Head or Bulk demagnetizer. Use of a magnetized scissors will result in a "Click" at the spliced area.

Splicing tape : Use only a commercial splicing tape. Never use Celophane (Scotch) tape as the adhesive will spread and contaminate your recording heads.

Method of splicing: Overlap the ends to be spliced by approximately ½ inch, align them carefully then cut through the center of the overlapped area at a 60° angle. The ends of the slanted cut tape are then butted together and the splicing tape applied to the base side of the tape. To insure firm adherence, the splice is placed on a hard surface and the splicing tape rubbed briskly with your fingernails or any hard smooth object. Next trim off any excess splicing tape, cut slightly into the tape on both edges at the spliced area. (See illustration)

Expert Use of Rec. Bias, Rec.Eq. and Pause

REC. BIAS / REC. EQ.

Generally, for recording on regular tapes (Scotch 150; BASF LP–35; Agfa PE-31; SONY S-100; etc.), the REC. BIAS should be set to NORMAL.

When recording high performance tapes (Scotch 203; BASF LP-35LH; Agfa PE-36; SONY SLH-550; etc.) which require a larger bias than regular types, always set the REC. BIAS REC. EQ switches to HIGH. This will allow taking complete advantage of all the merits of a high performance tape at recording–wide range, high SN ratio, large output, low distortion and wide dynamic range.

NOTE: Not only will the high notes be exaggerated and sound balance destroyed when a recording is made on a high performance tape at the NORMAL setting of the switch but distortion will increase and the sound will be unnatural.
Also, in the opposite situation–if a regular tape is recorded with the switch remaining in the HIGH position, balance will be destroyed with lack of high notes, and moreover, the recording level will be low and sound unnatural.

EXPERT MONITORING AT RECORDING ON LOW NOISE TAPE

Although there will be no difference in sound level, when recording on regular tape, if the tape MONITOR switch is set to either SOURCE or TAPE, there will be difference in sound volume (including meter level difference) between the source and tape when using low noise tape (sound volume will be lower on the TAPE position but this is due to difference in tape sensitivity). If you wish to compare sound between the source and tape at the same sound level, advance the OUTPUT knob to match sound level with that from the source while the Tape Monitor Switch is in the TAPE position or, use the tape monitor switch on your amplifier to which this tape deck is connected. When using this switch, set the tape deck MONITOR switch to TAPE and match the sound volume with the OUTPUT knob.

PAUSE

In conventional tape decks, recording is started by depressing the recording button and then the 'play' button but the Model A-1250S features a unique recording system permitting the use of "PAUSE" during recording–a "commercial killer."

During recording, the tape can be stopped by setting the Tape Mode Lever to "PAUSE" to start again when the Lever is set to "PLAY" thus permitting one-touch start of the tape. Also, if you should wish to switch to the recording mode during playback, the Lever is set to PAUSE, and by depressing the RECORD button and then the ▷ button, the tape deck will be placed in the recording mode, ready to begin recording as soon as the lever is set to PLAY. Furthermore, if you wish to record or erase the tape during playback without stopping it, the tape deck can be put in the recording mode by simultaneously depressing the RECORD and ▷ button.

Recording in 4 Track Stereo

All recording with the A-1250S is accomplished from the left reel to the right. At the completion of the first two tracks, the reels are interchanged and the remaining two tracks are recorded. At this time you may affix the sensing tape and you are equipped for playback in either direction. The automatic reverse will function at the end of side one (the first two recorded channels) to reverse the direction of tape travel, play back the remaining two channels and the recorded will stop when the second two channels have been played through.

Recording with microphones

Plugs from the two microphones are plugged into the microphone jacks (MIC L, R) on the front panel—the left microphone plug into L, and the right one into R. The microphone recording levels are controlled by the MIC knob above. Use a microphone with an impedance of 10KΩ or lower. A 600Ω microphone can also be used.

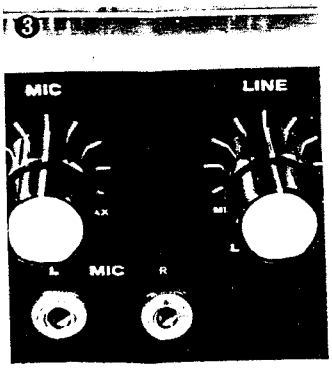
R ›rding from a phono player, tuner, tape, etc.

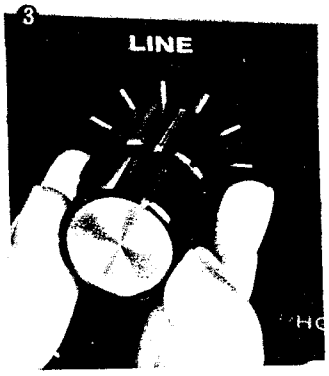
REC. OUT from your stereo amplifier or preamplifier outputs from your phono player, radio tuner, tape player and others must all go to the LINE IN jacks (refer to page 7). Recording level of signals to LINE IN are controlled by the LINE knob on the front panel.

Sound mixing of mic. with the phono player, tape or other sound

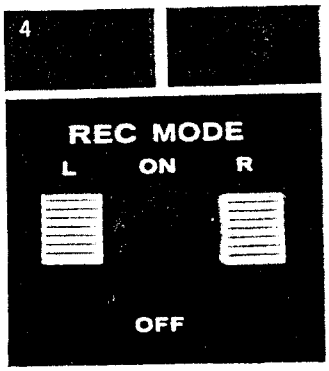
With the microphones plugged into MIC IN and the porper sources into LINE IN, each signal is controlled by their respective knobs to set the recording level.

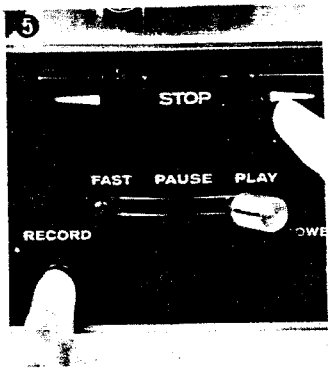
1 Set the TAPE SPEED knob to desired speed and thread tape.
2 Set the MONITOR switch to SOURCE.



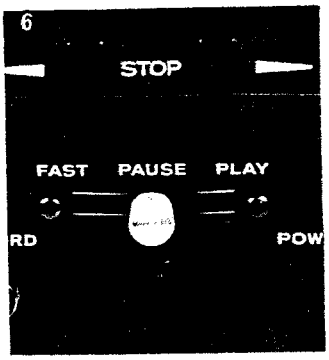


3 Set the MIC or LINE level controls so that the meter pointer does not scale out even at maximum sound volume (recording level adjustment). Sound volume of LINE OUT and PHONE is controlled by the OUTPUT knob.
(1) Speaker volume is controlled at your stereo amplifier. When recording with a microphone, the speaker sound will feedback through the microphone to cause unpleasant howling. In such a case, place the microphone away from the speaker or turn down speaker volume to zero and use a pair of headphones.
(2) To balance the left and right levels, individually adjust the inner and outer level controls so that the left and right level meter readings will be almost the same at peak levels.





4 Switch on both the LEFT and RIGHT switches of the RECORD MODE. If the tape to be used is of the high performance type requiring a larger bias than regular types, set the REC. BIAS and REC. EQ to HIGH.
5 Put the Tape Mode Selector Lever to PLAY. Then, recording will begin when the button is depressed while the REC. button is being depressed.



6 In the middle of a recording, if you wish to cut off a commercial, the tape will momentarily stop when the lever is put to PAUSE and start again when it is returned to PLAY.
7 Sound recorded on the tape can be monitored during recording by setting the MONITOR switch to TAPE and advancing the OUTPUT knob.
If the OUTPUT knob is adjusted and set to match in level with that of the SOURCE on the meter, the recording level can also be monitored at the TAPE position of the switch.
8 At the end of the tape, the left and right reels are interchanged, and the above procedures repeated to continue recording on the tracks.

Recording in 4 Track Mono

Recording with a microphone

When using one microphone, it is first plugged into the LEFT-MIC jack. The recording level of the microphone is controlled by the inner (L channel) MIC knob.

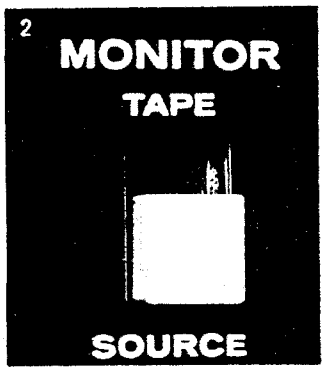
Recording from a phono player, tuner, tape, etc.

Preamplifier outputs from the phono player, tuner, tape player are first plugged into the L jack of the LINE IN. In a stereo amplifier, the connection remains as it is and the MODE SELECTOR is switched so as to send only the left channel signals to the tape deck (refer to your stereo amplifier Operating Manual). The line recording level is set by the inner (L channel) knob of the LINE control.

* The outer (R channel) knob is fully retarded.

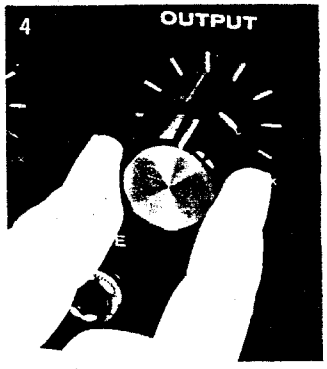
Sound mixing of mic. with the phono player, tape or other sound

With the microphone plugged into MIC IN and the proper sources into LINE IN, each signal is controlled by their respective knobs (inner L knobs only) to set the recording signal level.



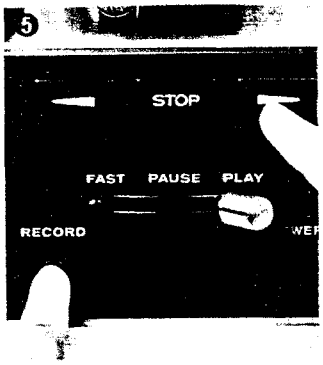
1 Set the TAPE SPEED knob to desired speed and thread tape on the machine.

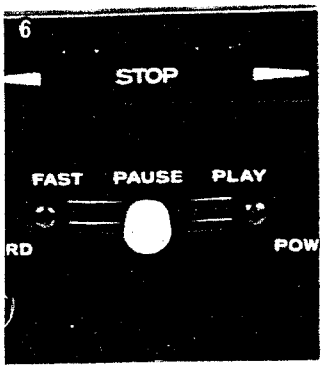
2 Set the MONITOR switch to SOURCE.



3 Set the MIC or LINE level control (inner L knobs only) so that the level meter indicates 0 VU at peak levels.
Be careful of howling (refer to page 15, recording in 4 track stereo, item 3-1).

4 Switch on the LEFT channel of the REC. MODE. If the tape to be used is of the high performance type requiring a larger bias than regular types, set the REC. BIAS and REC. EQ to HIGH.





5 Put the Tape Mode Selector Lever to "PLAY". Then, recording will begin when the ▷ button is depressed while the "REC." button is being depressed.

6 In the middle of a recording, if you wish to cut off a commercial, the tape can be momentarily stopped by putting the Lever to "PAUSE" and started again by returning it to "PLAY".

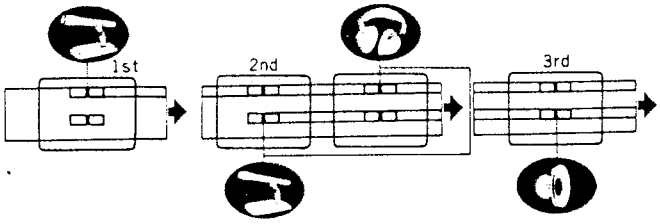
7 Sound recorded on the tape can be monitored during recording by setting the MONITOR switch to TAPE and advancing the OUTPUT knob (inner L knob only).
If the OUTPUT knob is adjusted and set to match in level with that of the SOURCE on the meter, the recording level can also be monitored at the TAPE position of the switch.

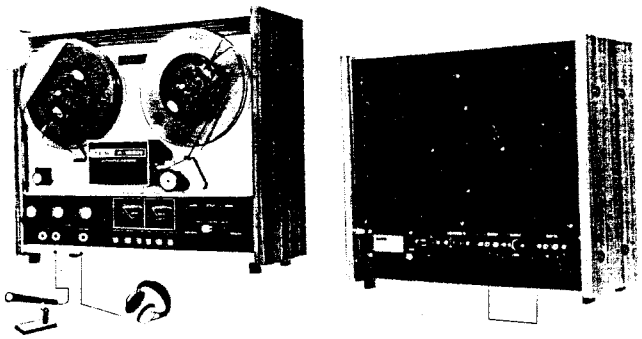
8 At the end of the tape (at finish of track 1), to continue recording (on track 4 which is on the opposite side of track 1 and in the other direction) the left and right reels are interchanged and the tape restarted in the recording mode.

9 Track 3 is recorded next, with the full reel again on the left. But this time, switch on the RIGHT channel of the REC. MODE and arrange that all the sources come through RIGHT channel. The completion of the program may be recorded on Track 2 by again turning the reels over.

Recording Sound-on-Sound

Sound-on-sound and language training can be done on the Model A-1250S Stereo Tape Deck.
A preliminary mono recording on track 1 (left channel) is played back, mixed with sound from the microphone and re-recorded on track 3 (right channel).
For instance, a one person duet or trio with accompanying music in the background (Sound-on-Sound) can be made, or the teachers pronunciation and the students voice can be recorded together during language training.





1 Music (or the teachers voice) which is to be recorded first is put on track 1 (refer to Mono Recording, page 16).
(1) At the beginning of recording, reset the index counter to zero to indicate start of recording.
(2) Upon starting the tape, the playback is monitored (MONITOR set to TAPE) and the OUTPUT knob set (so that the left channel level meter indicates a maximum of 0 VU).
On finishing the track 1 recording, rewind tape to start of recording. Switch OFF the LEFT channel of the REC. MODE.
3 Interconnect the OUTPUT-L and LINE IN-R jacks on the rear of amplifier with a connecting cable.
4 Plug a headphone in to the PHONE jack and the microphone into the MIC-R jack.
5 Set Lever to the PLAY position, switch ON the RIGHT of REC. MODE, and the tape will start recording when the ▷ button is depressed while depressing the REC button.
6 While listening to the playback of track 1 with a headphone (left ear only), and using the right channel MIC and LINE knobs (inner L channel) mix the microphone sound (the students voice for language training) for the second recording with the sound from track 1 and record on track 3.
7 On finishing the recording, rewind the tape to the start and play back the right channel (track 3).
If the results are unsatisfactory, the same recording onto track 3 can be repeated as many times as necessary since the original recording still remains on track 1.

Reel Height Adjustment

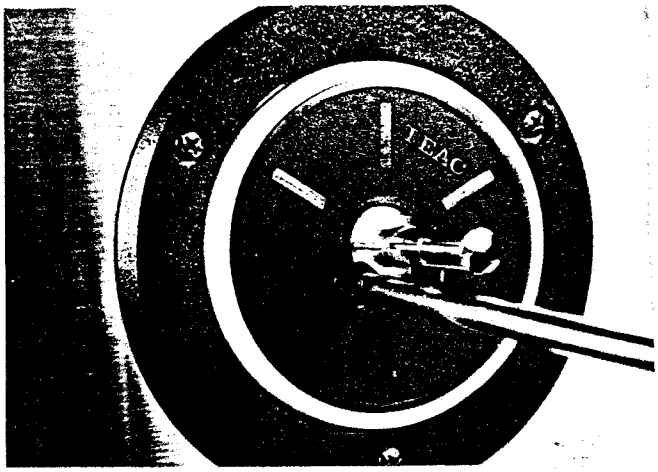
Sound-on-Sound Recording Step Chart

	1st	2nd	3rd
MIC IN or LINE IN jack	L	R	L
MIC or LINE knob	L	R	L
MONITOR switch	SOURCE and TAPE	TAPE	TAPE
Level meter	Left	Right	Left
REC. MODE switch	Left	Right	Left
OUTPUT knob	L	L	R
Headphone	Left	Left	Right

* Knob R (outer knob) is used at playback after finishing recording.
** Knob L (inner knob) is used at playback after finishing recording.

Reel height adjustment

The reel turntables of the A-1250S are readily adjustable in height to compensate for reels of differing thickness. Adjust as outlined below.



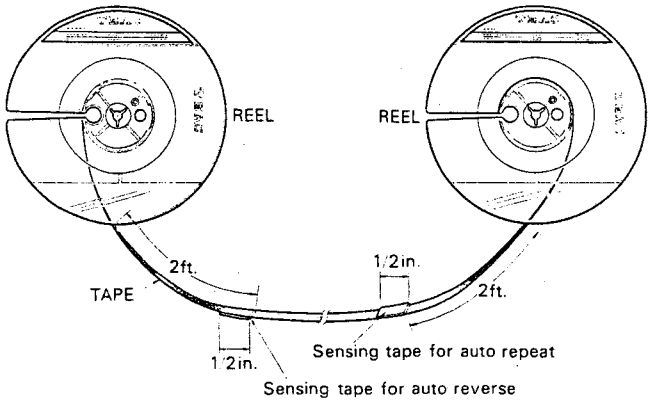
1. Remove reel from turntable. A single Philips head screw will be visible. To increase turntable height, turn this screw in a clockwise direction. To lower turntable height, rotate screw counterclockwise.
2. Rethread a tape on the deck and check tape travel for proper centering and smooth winding on the take up reel.

Automatic Reverse and Repeat Playback

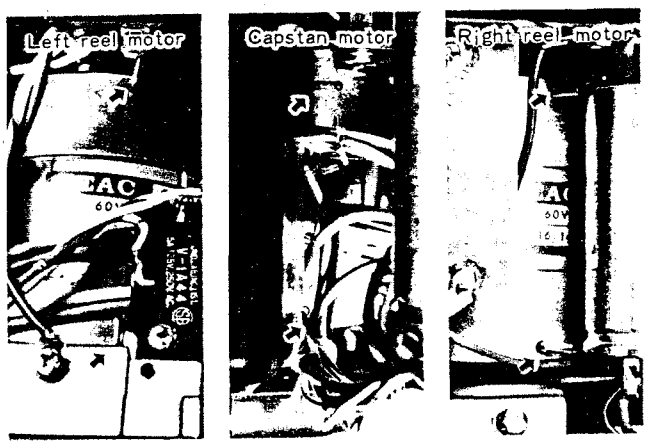
This equipment is an "Automatic reverse type" recorder. It is not necessary to turn over the reels to play both sides of the tape. At the end of the first two tracks the tape direction will automatically reverse and playback of the other two tracks will be accomplished. The automatic reverse is accomplished by means of a conductive sensing foil which should be applied as outlined below:

a. Cut a piece of sensing foil approximately ½ inch in length.
b. Position the foil approximately 4 feet from the end of the tape on the base side of the tape.
c. If continuous playback is desired apply a piece of sensing foil at each end of the reel, the tape will then play back and forth continuously until stopped by the operator.

Note: 1. The recommended sensing foil is "SCOTCH" #51 sensing tape.
2. If the sensing foil is too short or too long, the mechanism will not function properly.
3. The sensing foil must be precisely centered on the base side of the tape so that no adhesive surface of the sensing tape is exposed.
4. If the sensing tape is too close to the end of the tape, the tape may become detached from the reel hub before the reversing action takes place.
5. If the sensing contacts on the tension arm are dirty or should the sensing foil become tarnished, proper reverse action cannot be expected.



Oiling Cleaning



Follow the procedure below for oiling the motor.
1. Remove the power cord and all connecting cables.
2. Remove the tape deck rear cover by removing the six screws holding it.

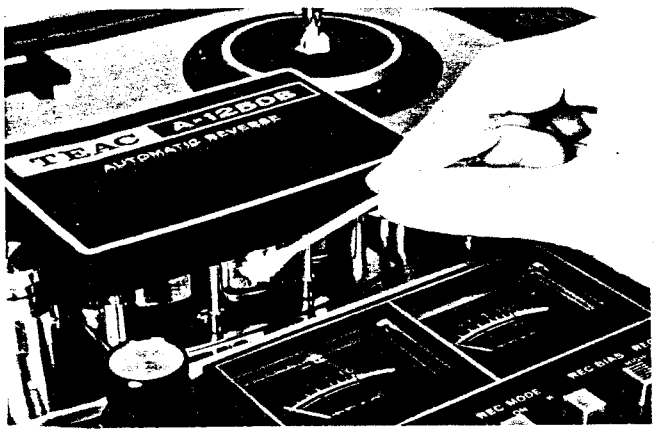
Apply the oil supplied with the tape deck or TEAC TZ-25 Oil to the points listed below at every 1,000 hours of use, or once a year even though infrequently used.

Capstan shaft . . . . . 2 drops
Rotate the dust cap counterclockwise with your fingers to remove and apply oil to the sponge ring. Replace dust cap.

Pinch roller shaft . . . . . 1 drop
Remove center Philips screw, pull off pinch roller and shaft assembly and apply oil to the shaft on rear side of roller.

Motors
1 capstan and 2 reel motors. Oil is applied to the 2 oil tubes each on the three motors, about 1 cc to each tube after approximately 1,000 hours of use; or about 0.5 cc once a year if the tape deck is infrequently used.

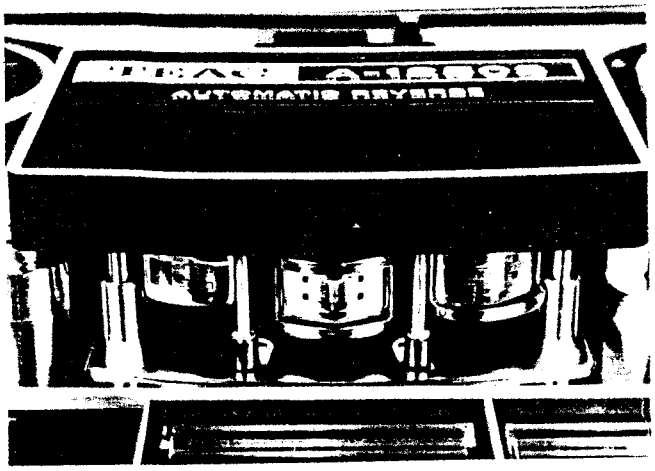
NOTE
1. Be careful not to apply an excess of oil. If oil should accidentally get on rubber parts or belts, clean it c immediately with Rubber Cleaner fluid in the TEAC TZ-261 kit.
2. Lubrication should be accomplished immediately after use of the tape deck while it is still warm.



To avoid poor erasure, decrease of the high notes or other troubles, the heads and tape guides over which the tape travels must always be kept clean. Before using the tape deck, make it a rule to clean all parts with the TEAC TZ-261 Head and Rubber Cleaner Kit.

NOTE
1. When using the polishing silicone fluid or silicone cloth on the tape deck, do not use them on the capstan shaft, pinch roller rubber surface, and reel turntables. For cleaning the pinch roller, use the Rubber Cleaner Fluid in the TEAC TZ-261 kit.
2. Be careful not to use carbon tetrachloride for cleaning the pinch roller as it may cause swelling of the rubber and subsequently distort it.

Erasing



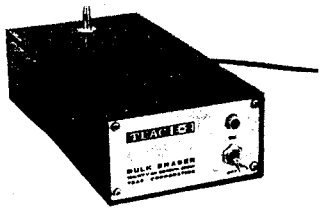
The head line-up of the Model A-1250S as seen from the front is as shown in the photo.

Since the recording head functions throughout the recording mode, if a pre-recorded tape is used for recording, the old recording will be erased first by the erase head and a new recording made at the recording head.

To erase all recordings

To only erase the tape, the MIC and LINE knobs are fully rotated counterclockwise to prevent any sound from being recorded, the tape started in the stereo recording mode, 2 tracks (tracks 1 and 3) will be erased. After completing erasure of the first two tracks, the reels are interchanged and the above procedure repeated. This will erase the remaining two tracks (tracks 4 and 2).

To efficiently erase old recordings from tape in a few seconds, the use of the TEAC Model E-2 Tape Eraser is recommended.



Model E-2 Tape Eraser

To erase a section of a recording

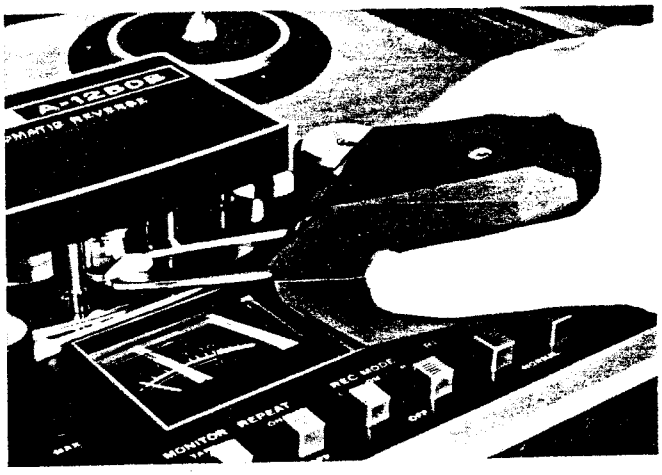
1 Switch on either or both the LEFT and RIGHT of the REC. MODE and start the tape in the playback mode by depressing the button (do not depress the recording button yet). When the portion to be erased arrives simultaneously depress the RECORD and ▷ buttons.

2 As soon as the last part of the section to be erased passes the erase head, quickly depress the STOP button. Be extremely careful not to erase more than intended which may happen if you should miss correctly timing the instant to depress the RECORD button, ▷ button, and the STOP button.

Precaution at stop-and-go recording

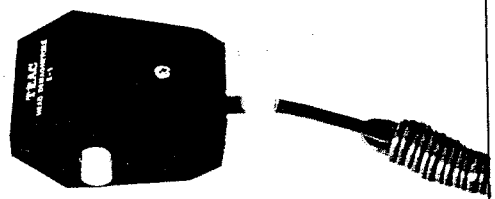
When you do intermittent stop-and-go recording on old recorded tape, a portion of the old recording will remain unerased at the point where the STOP button is depressed. To prevent such fault, always completely erase the tape of old recordings before you start recording.

Demagnetizing



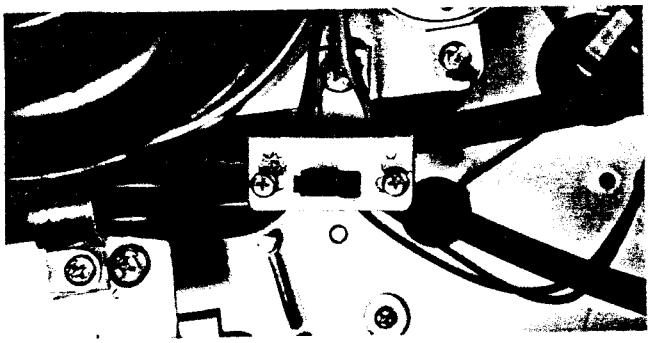
During long periods of use, the heads will become slightly magnetized. As a result, the high frequency will decrease, noise will develop, or in extreme cases the high regions will drop out or introduce noise into your valued pre-recorded tapes. To keep your recorder operating at optimum efficiency the heads should be demagnetized at least once for every 50 hours of use, with a TEAC Model E-1 Head Demagnetizer, using the procedures outlined below:

1 Turn off power to the tape deck.
2 Attach the plastic protectors on the pole tips of the Demagnetizer.
3 Plug the Demagnetizer cord into an A.C. outlet.
4 Depress the Demagnetizer power button, bring the tip close to the head and slowly move it up and down 4 or 5 times.
5 Slowly draw it away from the head.
6 After finishing the above procedure on each head, turn off power to the Demagnetizer ONLY after it has been drawn at least 12 inches away from the heads.
7 The same demagnetizing procedure is followed on each head, capstan shaft, and the guide posts.



Model E-1 Head Demagnetizer

Changing the Power Line Setting



TEAC Model A-1250S Stereo Tape Deck is adjusted to the power voltage and frequency indicated on the carton, before shipment from the factory. If it is to be used under different power ratings, the tape deck must be reset as outlined below:

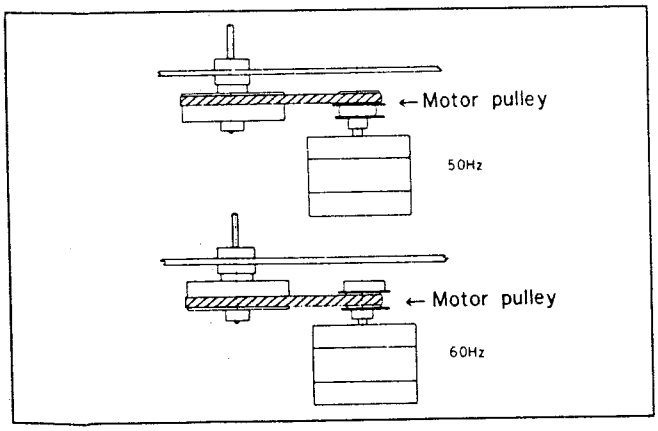
NOTE:
Always disconnect the power cord from the A.C. outlet before resetting.

When voltage is different

The Model A-1250S may be set for 100, 117, 200, 220 and 240 volt AC. To change the voltage, unscrew the fuse in the center of the voltage selector plug. Pull out the plug and reinsert it so that the desired voltage shows in the cutout. Reinstall the fuse.

When frequency is different

1 Remove the power cord and all connecting cables.
2 Take off tape deck rear cover by removing the six screws holding it.
3 The belt linking the motor pulley and flywheel must be repositioned.
The motor pulley on the Model A-1250S has two steps and difference in rotation due to a different power frequency is compensated by changing the belt step on the pulley. Reposition the belt with your fingers, at the flywheel first and then at the pulley when switching from 60Hz to 50Hz or the pulley first and then the flywheel at changing from 50Hz to 60Hz.
4 After repositioning belt, rotate the flywheel several turns with your finger to make sure the belt is correctly seated on the steps.
5 The frequency selector inside the tape deck must be switched to the frequency of the power line.
6 Reinstall the rear cover of tape deck.



Specifications

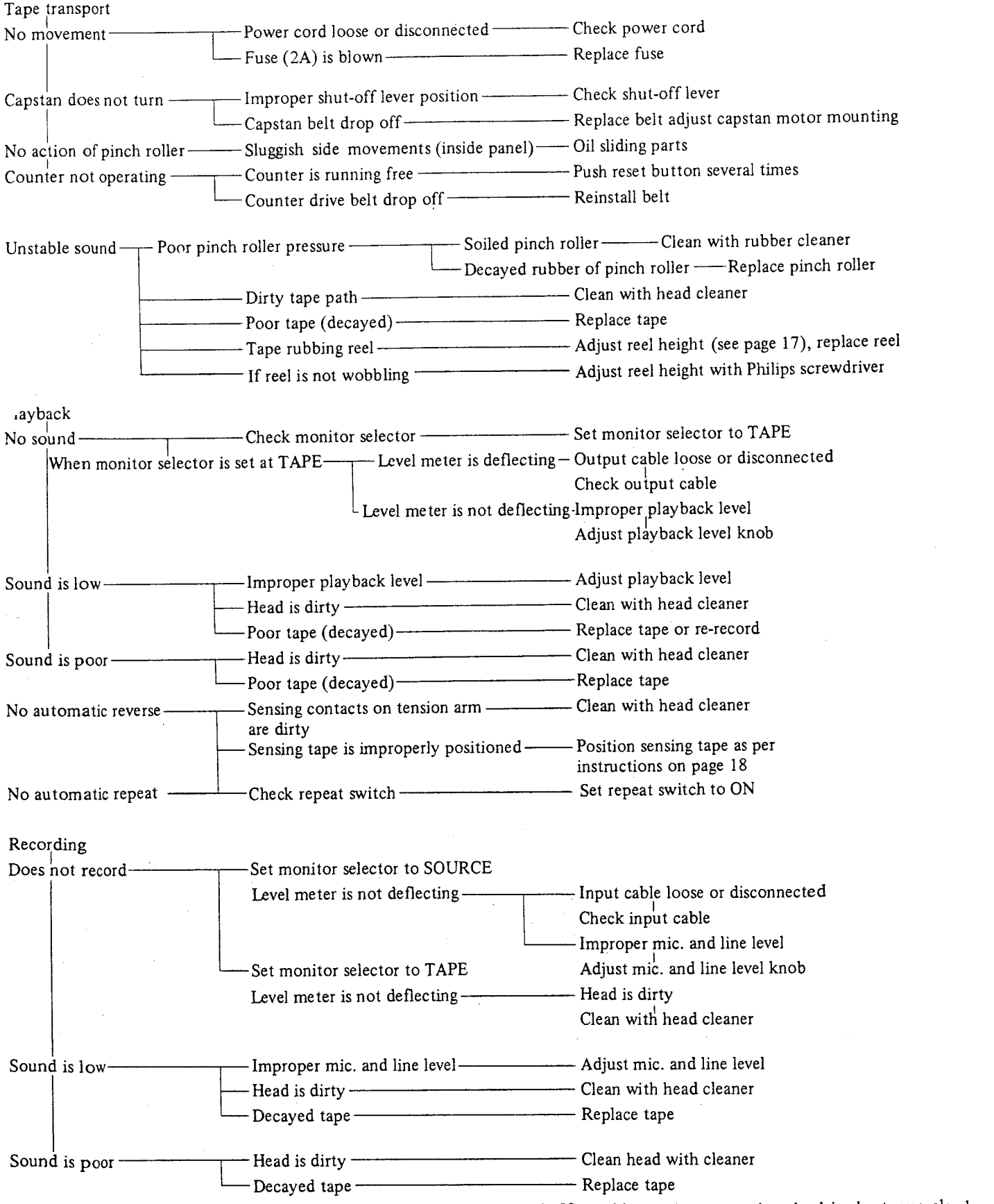
Heads	Three, 4 track 2 channel, stereo or mono, erase-record, playback and rev. playback
Reel Size	7" and 5"
Tape Speed	7½ ips and 3¾ ips (± 0.5%)
Motors	1 dual speed hysteresis synchronous capstan motor 2 eddy current induction reel motors
Wow and Flutter	0.08% at 7½ ips 0.10% at 3¾ ips
Frequency Response	30 – 22,000 Hz (± 3 dB, 40 – 18,000 Hz) at 7½ ips 30 – 16,000 Hz (± 3 dB, 40 – 12,000 Hz) at 3¾ ips
Signal to Noise Ratio	55 dB
Harmonic Distortion	1% at 1,000 Hz normal operating level
Crosstalk	60 dB at 1,000 Hz
Stereo Channel Separation	50 dB at 1,000 Hz
Fast Winding Time	90 seconds for 1,200 feet
Inputs	Microphone : 0.25mV/–72 dB (600–10,000 ohms) Line : 0.1V, 50,000 ohms or more
Outputs	Line : 0.3V for load impedance of 10,000 ohms or more Headphones: 8 ohms
Power Requirements	100/117/200/220/240 V AC, 50/60 Hz, 140 W
Dimensions	15 -1/16"(H) x 17-5/16"(W) x 8"(D) (383(H) x 440(W) x 203(D) mm)
Weight	37½ lbs (net), (17 kg (net))
Standard Accessories	Empty reel, input-output connection cord, oil and applicator, fuse, cleaning stick, Silicone cloth, rubber feet, AC power cord, instruction manual, others

* Specifications were determined using a low noise tape.
* Features and specifications subject to change without notice.

Optional Accessories

HP-101 Stereo headphone (8 ohms)
E-1 Head demagnetizer
E-2 Tape eraser
RE-701 7 inch reel (large hub)
RE-702 7 inch reel (small hub)
TZ-261 Head and rubber cleaner
TZ-252 Oil and polisher

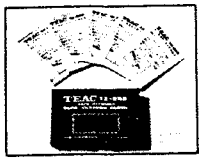
Trouble Shooting Chart



* If trouble persists, even though this chart was closely followed to remedy the cause, take the tape deck to your dealer or contact any TEAC Service Center.

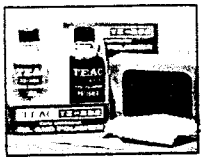
Optional Accessories

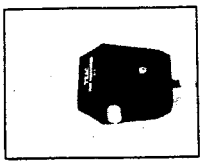
◀TZ-261
Head and
rubber cleaner



TZ-255▶
Oil kit

◀TZ-253
Tape cleaning
cloth



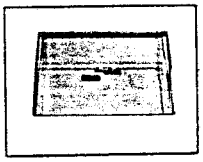


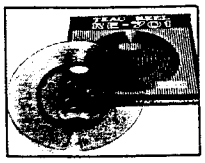
E-2▶
Tape eraser

◀E-1
Head eraser

TZ-250▶
Dust Cover

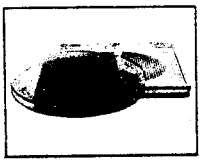
◀HP-101
Dynamic
headphone (8ohms)

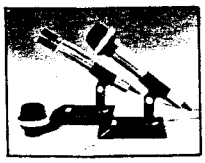




RE-702▶
7 inch reel
(small hub)

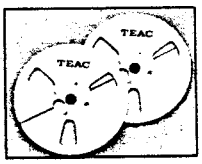
◀RE-701
7 inch reel
(large hub)

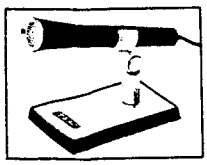




RE-711▶
7" metal reel

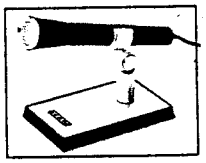
◀MC-201
Electret
condenser
microphone

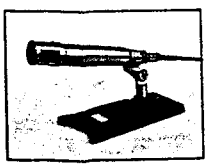




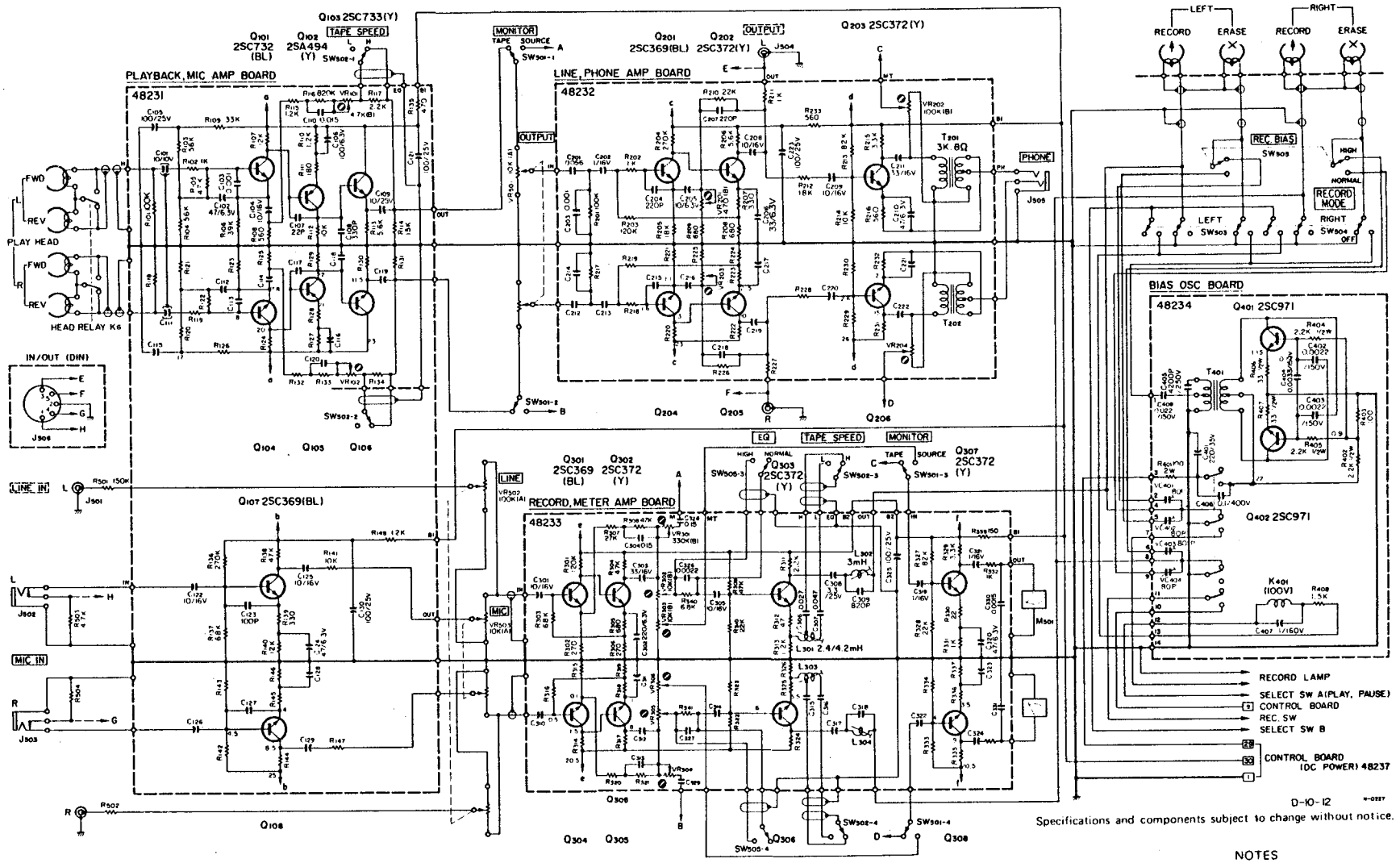
MC-106H▶
Dynamic
microphone
(10,000 ohms)

◀MC-106L
(600 ohms)





◀MC-105
Unidirectional dynamic microphone
(for both 600 ohms
and 10,000 ohms)



D-10-12

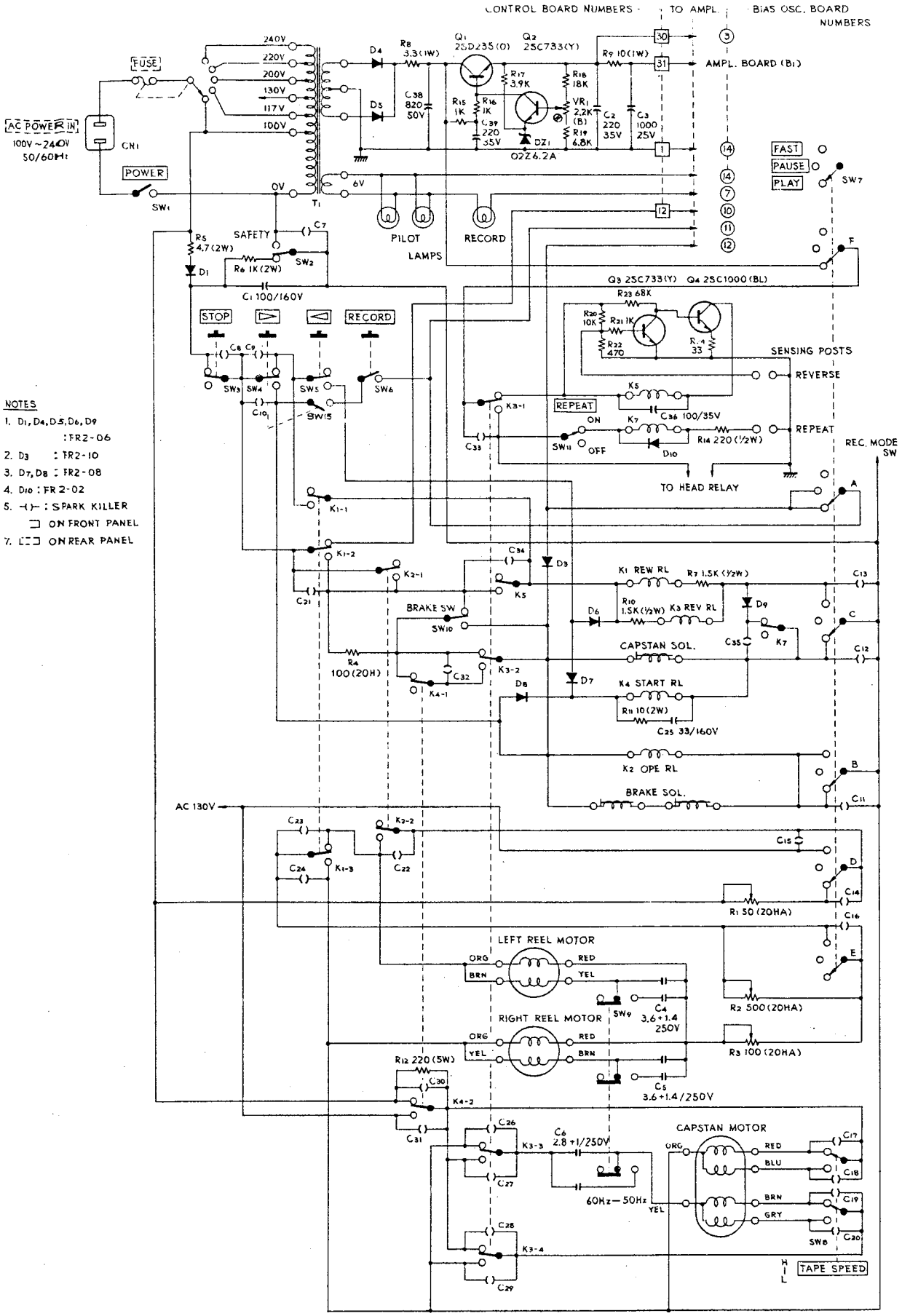
Specifications and components subject to change without notice.

NOTES

Schematic diagram shown in **PLAYBACK** mode.
Unless otherwise specified:
All resistors values in ohms, ¼ watt, K = 1,000 ohms
All capacitors values, in micro farads
Screwdriver adjustment
▭ :on front panel, ▭ :on rear panel

TEAC A-1250S SCHEMATIC DIAGRAM

PREAMPLIFIER



NOTES

1. D_1, D_4, D_5, D_6, D_9 : FR2-06
2. D_3 : FR2-10
3. D_7, D_8 : FR2-08
4. D_{10} : FR2-02
5. ⊣⊢ : SPARK KILLER
6. ⊐ ON FRONT PANEL
7. [⊐] ON REAR PANEL

TEAC A-1250S TAPE TRANSPORT CIRCUIT DIAGRAM